

CLAIMS

I claim:

1. A method for molding a susceptor-impregnated thermoplastic foam, comprising the steps of:
  - 5 a) heating the susceptor-impregnated thermoplastic foam;
  - b) imprinting an object against the heated susceptor-impregnated thermoplastic foam; and
  - 10 c) allowing the susceptor-impregnated thermoplastic foam to cool into a hardened form conformed to the imprint of the object.
2. The method of Claim 1, wherein the susceptor-impregnated thermoplastic foam is heated by induction.
3. The method of Claim 1, wherein the susceptor-  
15 impregnated foam is electrically insulating.
4. The method of Claim 1, wherein the susceptor-impregnated thermoplastic foam is imprinted with a body part.
5. The method of Claim 1, wherein a laminate including a  
20 heated susceptor-impregnated thermoplastic foam is imprinted with a body part.
6. The method of Claim 1, wherein at least a portion of a hand is imprinted against the heated susceptor-impregnated thermoplastic foam.

7. The method of Claim 1, wherein at least a portion of a foot is imprinted against the heated susceptor-impregnated thermoplastic foam.
8. The method of Claim 1, wherein a head or a portion of  
5 a head is imprinted against the heated susceptor-impregnated thermoplastic foam.
9. An electrically-insulating susceptor-impregnated article comprising:
  - 10 a) foam, wherein the foam provides structure to the article; and
  - b) susceptor particles, wherein the susceptor particles are impregnated within the foam, and wherein the susceptor particles are present in a concentration that:
    - 15 1) is sufficient to make the article thermoplastically conformable to a mold upon heating the susceptor particles with microwave energy, and
    - 20 2) is sufficiently limited to preserve the electrically-insulating character of the article.
10. The electrically-insulating susceptor-impregnated article of Claim 9, wherein a majority of the  
25 susceptor particles are physically separated from all other susceptor particles.
11. The electrically-insulating susceptor-impregnated article of Claim 9, wherein the foam is a component of an article of apparel.

12. The thermoplastic piece of apparel of Claim 9, wherein the foam is a component of an insole.
13. The thermoplastic piece of apparel of Claim 9, wherein the foam is a component of a glove.
- 5 14. The thermoplastic piece of apparel of Claim 9, wherein the foam is a component of a footwear liner.
15. The thermoplastic piece of apparel of Claim 9, wherein the foam is a component of a piece of guard equipment.
- 10 16. The thermoplastic piece of apparel of Claim 9, wherein the foam is a component of a hand grip.
17. The thermoplastic piece of apparel of Claim 9, wherein the foam is a component of a seat.
18. The thermoplastic piece of apparel of Claim 9, wherein the foam is a component of a moldable wrap.
- 15 19. A method for manufacturing foam comprising the steps of:  
a) mixing a resin and a susceptor material; and  
b) heating the susceptor by induction to accelerate polymerization of the resin.
- 20 20. A method for manufacturing foam comprising the steps of:  
a) mixing a resin and a susceptor material; and  
b) heating the susceptor by magnetic induction to accelerate polymerization of the resin.

21. A method for molding polymeric articles comprising the steps of:
- a) filling a mold cavity with a resin-based composition including a susceptor material; and
  - 5 b) heating the susceptor material by induction to accelerate polymerization of the resin-based composition.
22. A thermoplastically-conformable insole comprising a foaming burst pak layer including a first package
- 10 containing a resin and a second package containing an additive that will promote polymerization of the resin when contacted with the resin.
23. The thermoplastically-conformable insole of Claim 22 wherein the foaming burst pak layer includes variable
- 15 density foam inserts.
24. A thermoplastically-conformable insole comprising:
- a) a reactive burst pak layer including a first package containing a first reactant and a second package containing a second reactant, wherein the
  - 20 first reactant and the second reactant will react exothermically when contacted; and
  - b) a foam layer in thermal contact with the reactive burst pak layer.
25. A thermoplastically-conformable insole comprising:
- 25 a) an electrically-conductive resistive circuit; and
  - b) a foam layer in thermal contact with the electrically-conductive resistive circuit.

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26. The thermoplastically-conformable insole of Claim 25 wherein the electrically-conductive resistive circuit includes a removable bus bar.

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